

VILLAGE PROPERTIES, STATE NEGOTIATIONS: DECENTRALIZATION AND
TERRITORIALIZATION OF SENEGAL'S FORESTS

A Thesis

Presented to the Faculty of the Graduate School
of Cornell University

In Partial Fulfillment of the Requirements for the Degree of
Master of Science

by

Ewan Scott Robinson
May 2018

© 2018 Ewan Scott Robinson

ABSTRACT

In the last two decades, legal reforms and development projects in Senegal have purported to transfer authority over thousands of hectares of forests, pastures, and fisheries from state agencies to local elected councils, customary chiefs, and user committees. Yet in addition to transferring official powers, these efforts have introduced new spatial categories and legal techniques such as local conventions and village protected sites. These tools alter the terrain on which state agencies, politicians, commercial interests, and customary leaders – not to mention the numerous groups whose livelihoods depend on these resources – seek to access and control natural resources. By tracing the evolution of one of Senegal’s first community forestry initiatives over a 17-year history, this article argues that decentralization has fixed forests in place and privatized common-property, while also disrupting the presumption of separate domains of “state” and “community”. Rather than creating territories governed by communities, the creation of village forests drew together customary authorities, local politicians, and forestry technicians in relations of mutual dependence and informal collaboration. One effect of decentralization has been the incorporation of new resources and property relations into networks of informalized and privatized state power.

BIOGRAPHICAL SKETCH

Ewan is a PhD student in the Department of Development Sociology at Cornell University. His current research focuses on how relationships between development agencies, state institutions, and private sector organizations shape land distribution and agricultural development in Tanzania. Before coming to Cornell, Ewan spent 4 years as a research and communication professional at the Institute of Development Studies in Brighton, England. During this time, he led research on food systems, agricultural value chains, and human nutrition. He has carried out research and policy engagement in Senegal, Ghana, Nigeria, and Tanzania. Ewan holds an M.A. and a B.Sc. from the University of Illinois at Urbana-Champaign.

ACKNOWLEDGMENTS

This research was funded by a Fulbright U.S. Student Fellowship and by a grant from the Global Dimensions of Environmental Change Specialty Group of the Association of American Geographers. I am grateful for insightful comments and advice from Wendy Welford, Lori Leonard, Hilary Faxon, Christian Lund, and from participants in the writing workshop “The Everyday Politics of Dispossession: Land, Resources and Rights,” held at Cornell University in October 2017.

TABLE OF CONTENTS

1.	Introduction	6
2.	Governing land: politics, techniques, and practices	8
3.	Methods and study site	13
4.	Agrarian change and forest regulation in Kaolack	15
5.	Initiating community-based forest management	21
6.	Fixing property: the making of village forests	25
7.	Making authority: linking community and state regulation	34
8.	Enclosing forests, privatizing state power	44
9.	References	47

1. INTRODUCTION

In the last two decades, hundreds of thousands of hectares¹ of Senegal's national territory – encompassing woodlands, pastures, tree groves, and fisheries – have been classified as local resource management zones and placed under the authority of village committees or private associations. Similar trends have unfolded across West Africa and beyond (Umutoni et al. 2016; Djiré, Polack, and Cotula 2014; St-Amant-Ringuette 2014; Liba'a 2011; Granier 2010; Alinon and Kalinganire 2008). Senegal was an early leader in decentralization, due to its progressive 1996 legal framework and support from major international development agencies². Studies of the actual effects of decentralization policies have identified that they often transfer powers to a range of institutions, including elected officials, user committees, and customary chiefs (Poteete and Ribot 2011; Ribot, Chhatre, and Lankina 2012). These institutions are in turn accountable to various constituencies, but often not to the broad majority of resource users (Faye and Sougou 2014; Bandiaky 2008). Critical research has thus questioned the extent to which transferring ownership rights or management powers to village-based entities represents genuine decentralization (Lund, Rutt, and Ribot 2018). Yet far fewer studies have examined how the various manifestations of decentralization not only shift powers from state administrators to local institutions, but also introduce new spatial and legal techniques, categories, and practices, which might themselves alter structures of authority over resources (Peluso and Lund 2011). How, in

¹ No precise data have been produced, but reports by a number of large, agency-funded projects that have promoted these allocations suggest at least several hundred thousand, if not more than a million hectares have been subject to local conventions (Seegers 2005; USAID 2011)

² Recent projects include World Bank-funded PROGEDE, USAID-funded Wula Nafaa, and GIZ-funded PERACOD and PRECOBA.

other words, does decentralization entail a re-territorialization of space and authority, and what consequences might this process hold for regimes of resource access, control, and allocation?

This article explores these questions by tracing the emergence since the 1990s of a particular territorial approach to the management of land and resources, widely known in francophone West Africa as the “local convention” approach (Granier 2006; Alinon and Kalinganire 2008; Lavigne Delville 2009). Like other policy approaches inspired by common-property theory (Bardhan and Ray 2006; Ostrom 2015), local conventions propose that resource degradation and conflict can be addressed when local institutions can elaborate, formalize, and enforce regulations governing the use of valuable resources. When implemented in specific projects, local conventions tend to combine participatory research approaches with the formalization of “local bylaws” by government institutions. Local conventions overlap with other schemes for territorial management, including community-based natural resource management and the French *gestion des terroirs villageois* (village land management) (Gray 2002; Bassett, Blanc-pamard, and Boutrais 2007). These bodies of thought and practice all argue that transferring authority and responsibility to local agents will produce more efficient management, environmental sustainability, local accountability, and economic self-sufficiency (Brosius, Tsing, and Zerner 1998; Blaikie 2006).

This article undertakes a case study of PAGERNA, a development project that pioneered local conventions in Senegal, and of the diverse actors who drew upon the project to create a regime of village forest management. Comparing one of the project’s earliest districts with others that pursued community forestry later, I trace how a repertoire of spatial categories, legal techniques, and institutional relations developed and evolved during the project and in the decade after it ended. I argue that this repertoire contributed to re-territorializing land and authority in

Central Senegal, laying the groundwork for the privatization of forest resources. At the same time, the practices and relationships through which village authorities, state technicians, and elected officials sought to govern forests entailed a complex landscape of authority that challenges the conception of territorialization as a project to expand the state's power over people and resources. Instead, the regime of authority that emerged entailed widespread informalization, subversions of official procedures, and the deepening of state actors' dependence on those who are supposedly outside the state. In short, territorial decentralization contributed not only to new enclosures and exclusions, but also to the informalization, privatization, and dispersion of state power.

2. GOVERNING LAND: POLITICS, TECHNIQUES, AND PRACTICES

To make this argument, I draw on critical literatures on the politics of property formation (Ribot and Peluso 2003; Sikor and Lund 2009; Lund and Boone 2013) and to work on internal territorialization as a form of state power (Vandergeest and Peluso 1995; Peluso and Vandergeest 2001; Byrne, Nightingale, and Korf 2016). This literature allows me to situate decentralization and community forestry in Senegal as processes that imbricated with and reshaped what has been called the "terrain of struggle" over natural resources (Corson 2011, 708). This begins with Lund's (2008) insight that "laws, regulations, and policies do not determine access and the use of resources as such, but erect a structure of opportunities for negotiation of these rights" (p.155). Legal reforms and development projects that propose new institutions and new rationale for managing resources articulate with pre-existing institutional structures and ongoing struggles over resources and set the terrain for a diversity of actors' practices and strategies as they seek to claim and contest rights to property and access (Berry 2009; Peluso and Lund 2011).

In post-colonial settings, these contests over land and resources are characterized by institutional pluralism: a broad range of customary, religious, ethnic, and private institutions operate alongside state agencies in creating and mediating resource rights (Lund 2006). This competition creates what Sikor and Lund (2009) elegantly characterized as a reciprocal “dynamics of power and authority”. Competing resource-users appeal to the institutions they believe are most likely to support their claims, while the institutions themselves seek to establish their legitimacy in the eyes of constituents through successfully authorizing particular users’ claims (*ibid*, p. 10). Thus, what is at stake in these struggles is not only who holds rights to particular resources, but also who holds the authority to *govern* particular social bodies by mediating their access to and benefits from resources (Peluso and Lund 2011). In some cases, the motivation for acquiring authority over resources can be as much about the opportunities this position provides for building networks of political supporters as it is about direct material benefits from resource control (Blundo 1997; Juul 2001). In these respects, the political processes through which particular forms of property and access are claimed and authorized is part of the ongoing process of state formation (Lund 2008; Lund and Boone 2013). Furthermore, this is a shifting, iterative form of politics. Legal and institutional reforms, new market opportunities, and realignments in national politics all reconfigure the opportunities and constraints available to the various actors vying for authority, leading to new alliances, the repurposing of institutions towards new ends, and the remaking of resources and of access regimes (Juul 2001; Lund 2016; Ballvé 2012).

Approaching the constitution of authority from a different angle, the literature on territorialization focuses on how particular practices of measuring, sub-dividing, and governing space have been integral to the making of modern state power. This broad field encompasses

extensive historical investigations of the emergence of nation-states as particular territorial forms (Agnew 1994; Sack 1986). In this paper, I engage only a narrow segment of this literature, beginning with what Vandergeest and Peluso (1995) famously termed “internal territorialization.” Here, territorialization involves a set of processes through which state institutions expand their control over people and resources within existing national spaces. Vandergeest and Peluso argue that this is accomplished through three moments or strategies: the creation and mapping of bounded territorial units, the allocation of property rights in these areas to particular actors, and the establishment of rules governing the use of the resources they contain (*ibid*). These territorial strategies closely resemble what Elden (2010) characterizes as the three modes of power inherent in modern territoriality: land, meaning the property relations that structure access to the means of production; terrain, the site on which strategies of rule and struggle take place; and what he defines as territory: the techniques through which land could be measured, represented, and controlled. Elden argues that the third of these, territory, is logically prior to the others, as the modern territorialization of power rests upon a particular calculative understanding of space and particular legal tools for controlling it (*ibid*, 810). Drawing on these understandings of territorial power, I seek to examine how the devolution of decision-making over particular land and resources in Senegal entailed the deployment of calculative and legal techniques, and how this process imbricated with and influenced the strategies of various actors vying for authority over land.

In thinking about the relationship between territorialization as the deployment of spatial-legal techniques and as the “terrains of struggle” on which contests over natural resources take place, Catherine Corson’s analysis of conservation territories in Madagascar (2011) is particularly insightful. Drawing on Sikor and Lund’s insights that granting property rights is a

means to authority, Corson argues that the state is far from the only actor involved in territorializing practices. In her study, transnational corporations and NGOs were centrally involved in planning and designating new conservation territories, with the result that these non-state actors “ultimately secured not only resource rights, but ‘state’ authority to decide the rights and acceptable uses associated with Madagascar’s new protected areas” (*ibid*, 709). This case reveals how powerful transnational actors can act like states through acts of territorialization, enhancing their own authority in national political domains. Yet, it also suggests the limits of territorial techniques: Corson concludes that most of the conservation territories produced in Madagascar were only “paper parks”, since state agencies lacked the capacity to enforce restrictions on land use and forest-cutting. What, then, is the relationship between powerful projects of territorialization and the implementation of these policies in areas where formal state institutions are weak, contested, and/or uninformed?

To understand the implementation and implications of territorializing techniques and strategies, I draw on literature on so-called everyday governance in post-colonial settings (Blundo and Meur 2008; Sardan 2014). Through ethnographic attention to the daily work practice of customs agents, judges, and elected officials, this research has called attention to the ubiquity of what are considered “non-state” actors, who turn out to be intricately involved in the functioning of state institutions (Juul 2006; Lund 2006; Mathews 2011). Particularly in the aftermath of structural adjustment policies that led to catastrophic shortages of staff and basic resources, African state agencies came to depend on small bribes from service users to meet salaries and replenish office supplies, and to collaborate with the very actors whose activities they were charged with regulating (Blundo 2001). In parallel, development agencies’ reorientation of aid away from state institutions and towards organizations seen as “civil society”

in the 1990s created opportunities for new types of political brokers, who mobilized networks of clients and supporters in order to access aid funding and channeled the resulting funds and projects in order to maintain their position of power (Blundo 1995; Mosse 2005).

The fact that the exercise of everyday governance relies on these relationships beyond the official state has been theorized as constituting the privatization of the state: government institutions have devolved major functions and decision-making roles to private businesses, NGOs, customary authorities, and community associations (Hibou 2004; Blundo 2001). Conversely, being integrated into patron-client networks allows state institutions to gain funding, political support, and popular legitimacy. Described by some as the “shadow state” (Reno 2000; Duffy 2005), these networks exert their own control over state institutions, which may thus serve more to accumulate power for these networks than to fulfill an official mandate of service delivery or law enforcement (Blundo 1997; Juul 2001). Attention to processes of everyday governance reminds us that particular territorial configurations are potentially-fragile performances; their coherence and authority depends on disparate actors cooperating to behave “as if” boundaries were truly immobile, state institutions definitively controlled particular spaces and functions, and as if expert knowledge accurately reflected real-world human and landscape dynamics (Matthews 2011; Jones 2012). Informalized governance at the boundaries of state institutions nonetheless powerfully influence who exercises power in particular spaces and who has access to particular resources (Peluso 2016). Land may indeed be enclosed and privatized, and territorial power may indeed be cemented, but these effects result not from preformulated plans, but from shifting alliances among politicians, bureaucrats, economic elites, and variously-stratified constituencies.

In the empirical case that follows, I trace shifts in property, authority, and state power through community-based forest management in Senegal's Kaolack Region, arguing that this process entailed the formation of new networks of quasi-informal, quasi-state power and new territorializations of land and forest resources. After presenting my methods and introducing the stakes of forest management in Kaolack, I narrate how the PAGERNA development project developed a strategy for transforming economically declining villages into responsible, self-disciplining resource managers. Next, I examine how project staff, government officials, and rural residents produced a set of spatial-legal technologies for classifying and managing land. By appealing both to the logic of state territorialization and to the interests of a patriarchal elite, these technologies proved successful in mobilizing political support, fixing spatial boundaries, and restricting access to forests. At the same time, I argue that the effectiveness of these techniques depended on the emergence of an alliance of village authorities, rural councilors, and forest service agents. These actors cooperated to enclose forests and discipline those deemed outside the community, in the process positioning themselves as local authorities and gaining access to powerful clientelistic networks.

3. METHODS AND STUDY SITE

In May 2010, I arrived in Niokoar District³ for the first time, accompanying staff from a Senegalese NGO who were conducting case studies on local conventions for natural resource management. The staff had chosen Niokar because of its reputation as being the first district in

³ At the time of research, Niokoar was one of Senegal's 370 *communautés rurales*, the smallest government administrative units. Since 2013, all *communautés rurales* have been re-designated as *communes*. However, their basic structure remains; since Independence, they have been the focus of Senegal's decentralization policies, as the seat of the elected local government bodies, the rural councils. To ensure anonymity, I have used pseudonyms for places and people throughout this paper.

the country to create such regulations. For 8 years beginning in 1994, Niokar had been involved with a development project known as PAGERNA⁴. While this project had ended in 2002, my fellow visitors had learned that some villages in Niokar were still actively regulating community forests some 8 years later. For my part, Niokar appeared an ideal place to study the dynamics of community forestry after outside support was withdrawn. After this initial visit, I spent 3 months in various villages in Niokoar between July and December 2010. I also visited two other districts that had had cursory involvement with PAGERNA in order to observe how local forest management had developed in the absence of prolonged outside support⁵.

My methodological approach involved 3 sets of activities: I spent the majority of my time in 15 villages, where I conducted semi-structured interviews with 94 residents. I purposively sought out both women and men, farmers and livestock keepers, and those identified as belonging to various ethnic groups in the region: Serer Saalum, Serer Siin, Wolof, and FulBe Saalum. I stratified my sampling in this way in order to investigate how perceptions of and responses to local forest management differed across those with differing positions in relation to household, community, and regional political economies. In addition, in 14 villages I interviewed village chiefs and forest guards (if one had been appointed) as those who were most active in forest management. My conversations focused on residents' experiences using various forest

⁴ PAGERNA was the French acronym for *Projet Autopromotion et Gestion des Ressources Naturelles dans le Sine-Saloum*. I explain the meaning of this acronym when I discuss the project in more detail, below.

⁵ PAGERNA staff held several meetings with the president of the rural council in Beidougoup in 2002, the project's final year. This led to the signing of a local convention document, which largely mirrored other such documents produced by PAGERNA. The president of the environmental commission of the rural council claims that he subsequently oversaw the installation of metal signs that designated local conservation areas in a number of villages. During interviews, however, very few residents were aware of what the signs meant (many had been subsequently removed) or of the existence of a local natural resource management system. The councilor who had overseen this said he regarded the protection efforts to have been a failure, because "women were still cutting the bush".

resources, their perceptions of the village protected sites, and their involvement in reporting rule-breakers and conducting management activities. I sought to understand how different residents supported, acquiesced to, and contested the local forest management regime, and their perceptions of the various authorities it involved. In addition to these interviews, I also visited various forest sites and participated in routine surveillance and collection of firewood and construction timber.

Second, I interviewed government bureaucrats and development experts in various forestry projects, including 6 former PAGERNA staff and 5 state foresters attached to projects⁶. I also interviewed 11 staff at various levels in Senegal's Forest Service hierarchy, including the regional director in Kaolack and 3 agents at rural posts (*agents de brigade*). Through these interviews, I documented the history of PAGERNA and the evolving relationship between project staff and forestry officials. I also asked foresters about their experiences working with local conventions, rural councils, and rural residents, seeking to trace when and how these actors cooperated or competed for authority. I complemented these accounts by analyzing a range of documentary material, including PAGERNA project designs, evaluation reports, and legal documents; records of rural council meetings; and ledgers recording permits and sanctions. These materials provided insights into both the formal procedures and daily practices of rural councilors, foresters, and villagers involved in forest regulation.

4. AGRARIAN CHANGE AND FOREST REGULATION IN KAOLACK

Located in the southern part of the semi-arid agricultural zone known as the Peanut Basin (**Figure 1**), Kaolack Region's social and ecological landscapes are shaped by a century of state

⁶ The official name of the national Forest Service is *Service des Eaux et Forêts et de la Chasse*.

efforts to develop commodity production. In the 1890s, the French extended direct administrative control, converting the kings (*buur*) of the predominantly Serer states of Siin and Saluum into their local administrators (Klein 1968). In this arrangement, the *buur* held an uneasy balance of power with Serer village authorities who were hereditary custodians of village lands. Serer authorities and the tenure system they oversaw were critical to facilitating French efforts to introduce peanuts into the crop system (Venema 1978; Galvan 2004), enabling the Siin-Saalum region⁷ to become one of the most productive areas in French West Africa in the first half of the 20th century (Venema 1978, 40). When Senegal gained independence in 1960, the new government heavily backed peanut exports, nationalizing the transportation and processing sectors and channeling massive quantities of subsidized inputs to farmers (Oya 2006). Yet rather than the desired agricultural intensification, this strategy triggered a massive spatial expansion of low-input cultivation (Venema 1978). State-subsidized plows and horses allowed patriarchal household heads to expand their control over family land, to mobilize extra-household agricultural labor, and to accumulate significant capital. Some of these men became a new class of rural capitalists⁸ (Oya 2001).

Senegal's peanut boom, however, was short-lived: faced with mounting debt and a decline in global commodity prices in the 1970s, the government stopped providing subsidized inputs and reduced the prices it offered farmers for their crops (Oya 2006). Over the following decade, the peanut economy collapsed and households withdrew from the market *en masse*,

⁷ The colonial-era administrative region (cercle) of Sine-Saloum covered the area currently divided between Kaolack, Fatick, and Kaffrine Regions.

⁸ The groups who benefitted most during this period included muslim marabouts who could claim a portion of their followers' labor and pre-muslim land priests who received portions of the surplus in exchange for access to land (Oya 2011).

focusing instead on food crops.⁹ During the 1980s and 90s, hundreds of thousands of young women and men left the Peanut Basin for Senegal's cities or the agricultural frontier (*cf* Mbow et al. 2008). Today, the Peanut Basin is a marginalized hinterland to the national economy. For the majority of rural households, commercial agriculture is barely viable and seasonal labor migration, petty commerce, and the sale of forest products are essential for making ends meet.

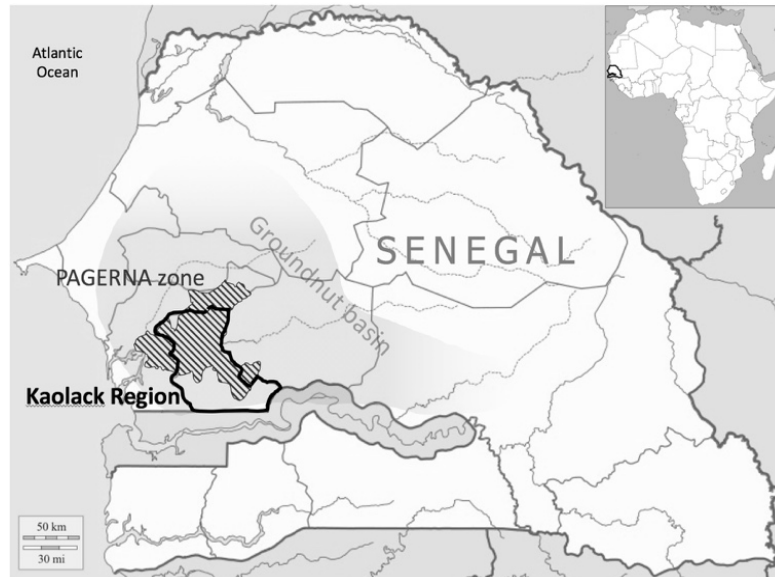


Figure 1 Location of Kaolack Region and the intervention zone of PAGERNA in Senegal. Map by the author.

In the aftermath of this economic collapse, access to forests assumed a greater importance in Kaolack. During the peanut boom, savannahs and woodlands were largely cleared for farming, while fallows were reduced or ended (Tappan et al. 2004; Galvan 2004). As a result, peanut and millet fields dominated the landscape, and the remaining uncultivated areas sat atop clayey soils or seasonal waterways that were not suited for crops. Though small in size, these remaining

⁹ Of course, the collapse of the peanut economy affected different socio-economic groups differently. In particular, urban and rural elites who invested in vehicles and warehousing benefited from the sale of state assets and the deregulation of trading. However, even elites tended to withdraw from cash crops following the crisis (Oya 2011).

forests¹⁰ were nonetheless important for local livelihoods, providing firewood, wild fruits, medicinal plants, construction timber, and livestock fodder. Oral histories of the area recount the gradual disappearance of larger trees during the 1970s and 80s, killed by drought or cut down and sold (see also Kaag 2005; Gill 2013). In need of cash to finance farming, many farmers annually harvested a few trees in their fields or in nearby pastures and sold them in urban areas. Meanwhile, with men unable to provide for household food budgets, more women undertook independent cash-generating activities, particularly petty commerce, dry-season vegetable production, and sales of fruits and firewood. In the post-boom years, livestock-keeping also became an important source of revenue for some households. With the majority of land under continuous cropping, trees were critical sources of animal fodder during the dry season, particularly the protein-rich pods and leaves of *kad* (*Faidherbia albida*). The narrow bands of uncultivated land known as *sao* were also essential for allowing livestock to circulate between villages, pastures, and watering points without damaging crops.

As forests became supplements to declining agricultural earnings, Senegal's forest laws had the effect of criminalizing many residents' small-scale forest uses. In a dual system that dates to colonial times, the national forest code has strictly regulated commercial forest exploitation while allowing rural inhabitants subsistence use (except of classified state reserves and protected species). The Forest Service has been particularly focused on controlling the exchange of Senegal's most profitable forest product, charcoal. Charcoal production is banned in the Peanut Basin and other Western regions; in the southeastern forest zone, the Forest Service

¹⁰ In describing these uncultivated areas as "forests," I define them based on the socio-ecological roles they play in local livelihoods and land tenure systems, rather than silvicultural criteria such as the presence of particular species or their stand density. The kinds and densities of trees vary dramatically across forest sites in Kaolack. Yet residents consistently understand these sites as lying beyond the zone of agricultural cultivation. In Wolof, these areas are described as "*àlla*".

enforces an oligopoly of legal production by powerful private traders and forest cooperatives. In 1996, the passage of Senegal's decentralization laws threatened the Forest Service's control over this system by transferring substantial decision-making powers to elected rural councils at the district level. In theory, these councils had the power to grant or deny permission to exploit natural resources and could issue local regulations for resource use (Ribot 2009; Juul 2001). However, the Forest Service employed a number of tactics to re-entrench its powers and uphold the cooperatives' oligopoly, including refusing to grant transportation permits and requiring the preparation of technical management plans prior to forest exploitation¹¹ (Ba 2006; Faye 2015).

While able to exert control over the charcoal trade, severe understaffing and budget shortfalls have meant that the Forest Service has never had the capacity to enforce regulations over the majority of Senegal's territory. Since its budget was slashed in the 1980s, the Forest Service has depended on development projects to temporarily employ its high-level officers, exposing the agency to donors' pressures to implement decentralization (Blundo 2014). The agency's basic functions, meanwhile, are starved of resources: even regional offices depend on under-the-table payments to be able to buy basic supplies (paper, fuel for vehicles)¹² (*ibid*). Brigade agents based at rural posts – officially responsible for territories covering several hundred or a thousand square kilometers – must pay for their own motorbikes, fuel, and uniforms.¹³ Given these constraints, agents depend heavily on the very resource-users whose

¹¹ For example, the World Bank and USAID each funded large projects to promote charcoal production by communities in southeastern Senegal, but local producer groups were unable to sell their product in urban markets because the Forest Service refused to grant them transport permits. Transport is by far the most profitable operation in the charcoal commodity chain (Ba 2006).

¹² These payments range from small-scale users paying 30 USD to move a single cart-load of charcoal to market, to commercial shippers who pay much larger bribes to departmental and regional officials in order to exceed their permit limits or avoid permitting altogether (Blundo 2013, 2014).

¹³ Essentially all ground-level law enforcement agents in Senegal are men, although women are employed as office workers in the regional and national offices.

activities they are supposed to regulate. Agents cultivate relations with local intermediaries who alert them to infractions. When they agents sanction rule-breakers – or take under-the-table payments – they pass a portion of these earnings back to their informants¹⁴. At the same time, agents must avoid upsetting politically-connected forest-users, who could have them re-assigned to undesirable posts or otherwise impede their career (Blundo 2013).

For rural residents, interactions with foresters and other state agents are governed by strict norms. Those who are seen to collaborate with the state at the expense of their kin and neighbors risk being condemned as corrupt, treacherous, and self-interested, and could face exclusion from important social events and sources of support and reciprocity (Blundo 2001; Galvan 2004; Blundo 2014). As one district-level forester whom I interviewed explained, “The population often says that the rule breakers are people just like them. It’s a mentality here. Do you know the expression, ‘A peasant farmer cannot catch his peer¹⁵’? If two people come from the same village, it’s often a question of honor.” Although impossible to quantify, the foresters whom I interviewed believed that most rural residents were complicit in disguising law-breaking. As a result, agents work with their informants discretely, often meeting at night. Official documents corroborate these reports; my examination of infraction records at the regional Forest Service office in Kaolack showed that agents wrote their own names in the box where they were supposed to list the name of their local informant. As Blundo (2013, 2014) argues, contemporary forest governance in Senegal embodies conflicting trends: the Forest Service is under pressure to support decentralized local government, and at the same time it is seeking to reinforce its power

¹⁴ The forest code dictates ranges for the fine amount for various infractions, leaving the agents with some discretion. In addition, it specifies that 70% of fines are to go to rural councils, 20% to local informants, and 10% to the agent who makes an arrest. In practice, this division is rarely respected, and agents often prefer to leave an infraction off the books and negotiate a smaller payment from the rule-breaker, some of which will be given to the informant and some of which will be passed up the Forest Service hierarchy.

¹⁵ In Wolof, “Baadolo menul jàpp morëm àm”.

vis-à-vis other state agencies. As they pursue these ends, forestry agents depend on informal and uneasy collaborations with various private actors in ways that flaunt official procedures and laws (Blundo 2013). This partial informalization and privatization of state governance set the stage for development projects' efforts to create a framework for community-based forest management in Senegal.

5. INITIATING COMMUNITY-BASED FOREST MANAGEMENT

In the early-1990s, the crisis of the agrarian economy, the fiscal pressures facing the Senegalese state, and the aid industry's turn towards participatory development set the stage for a shift in the way forests were governed in the Peanut Basin. Kaolack became a laboratory for developing spatial and legal techniques that territorialized rural space in new ways and reformed relations between residents and state authorities. At the forefront of this shift was a project known as PAGERNA (*Projet Autopromotion et Gestion des Ressources Naturelles dans le Sine-Saloum*), among the first in Senegal to attempt community-based natural resource management. Launched in 1994, PAGERNA ran a budget of 5.7 million Euros over its 8-year lifespan, with funding from the German development agency, GTZ¹⁶. By framing itself as an “autopromotion project,” PAGERNA emphasized that it would work with communities that were able to identify their own needs and objectives, and that it would support existing capacities, rather than introducing high-cost technical interventions¹⁷. The project's designers were particularly critical

¹⁶ Over its lifespan, PAGERNA pursued a dizzying array of activities, including numerous participatory workshops, trainings on agro-ecological techniques, construction of anti-erosion infrastructure, and the initiation of micro-lending schemes. This paper concentrates on the legal tools and institutions which it sponsored as means to achieve community-based resource management.

¹⁷ *Autopromotion* was the French term for an approach particularly common under European development aid funding, in which projects would identify rural associations who would propose specific local needs and activities, such as constructing wells and grain stores or establishing microcredit schemes. Many of

of the large-scale reforestation campaigns that had dominated environmental initiatives in the 1970s and 80s. PAGERNA's opening report argued that reforestation was costly and that the Forest Service lacked the means to maintain the resulting plantations (PAGERNA 1995). Privately, managers said they believed that local residents had actively sabotaged the plantations, perceiving them as a strategy by the Forest Service to gain control over village land. Like many government officials, PAGERNA staff believed that natural resources in the Peanut Basin were being progressively degraded¹⁸. Yet unlike most foresters, they saw rural communities as containing practices and institutions that could be used for the purpose of environmental restoration.

The institutional and discursive techniques through which PAGERNA sought to mobilize communities towards environmental conservation did not emerge pre-formed, but were the product of experimentation, collaboration, and contestation among project staff, village residents, and state officials. The project's technical director, Thomas, was a middle-aged German man who had previously worked for a Christian development organization. Thomas was given an unusual degree of flexibility to experiment with various approaches during the project's initial "open phase". In the first three years, he sought to identify village-level interventions that could be scaled up in the project's second phase. To enlist participation from Kaolack's predominantly Serer population, Thomas knew he needed staff fluent in local language and cultural idioms. He hired two men he knew from his previous work, both of who had grown up in the area. These

these rural associations evolved from formerly-state sponsored agricultural cooperatives, but by the 1990s, many were centralized bodies dedicated to attracting and redistributing development funding (Blundo 1997).

¹⁸ The local degradation narrative dominated understandings of environmental change across West Africa in the 1980s and 1990s (Fairhead and Leach 1995; Reenberg 2012; Mbow et al. 2008).

men served as the project's animators and representatives in rural areas¹⁹. After a set of initial visits, Thomas and the animators selected twelve villages across six districts for the phase one activities. In each village, the animators organized a 3-day-long participatory workshop, where they asked residents to recount local environmental and livelihood problems, to identify existing land management systems, and to propose ways the project could support them. At the same time, the animators cued villagers that PAGERNA was interested in specific kinds of problems and solutions.

When I met Salim, a consultant who had been a PAGERNA animator for 8 years, he remembered the initial participatory workshops with visible excitement. He explained that, after formal introductions, he had asked villagers to compare the condition of resources “in the past” and “today”. Villagers had often mentioned the scarcity of firewood and pasture, and declining crop yields; he in turn had suggested that these problems were caused by the lack of trees in the landscape. To help with his presentations, Salim had commissioned a friend to paint a series of images along a bolt of cloth several meters long, which came to be known as the *malaan nataal* (in Wolof, “image cloth”). When I visited Salim at his house, he demonstrated how he had wound the *malaan nataal* around two wooden spindles so that he could reveal one image at a time to his audience. The first images on the cloth depicted “the past,” showing a village of tidy compounds surrounded by abundant millet fields. In the background were dense areas of forest where people were gathering fruits, medicinal roots, and branches. The subsequent images represented an environmentally-degraded present, with millet fields half-barren, forests full of dead trees, and violent winds destroying thatched-roof huts. Further images showed who was

¹⁹ This French term is frequently used to describe NGO-employed brokers, who lead workshops and serve as liaisons between the project and their contacts in villages.

responsible for this environmental degradation: wood-cutters felling baobab trees (*gwi*), pastoralists cutting tree branches to feed their sheep, and men loading firewood onto carts. A final set of images displayed a potential future in which local management had restored the landscape, showing a farmer protecting saplings that were sprouting in his field, a woman cooking on a home-made energy-efficient stove, and a landscape carefully demarcated between fields, livestock corridors, wind breaks, and watering points. Salim told me the *malaan nataal* had been so successful in eliciting villagers' responses that, after PAGERNA closed, subsequent projects had commissioned 4 additional versions of the instrument.

PAGERNA's use of the *malaan nataal* clearly reflected the project's self-interest: it prompted villagers to focus on changes in natural resources (rather than changes in state policies or market conditions) and attributed environmental degradation to local actors. It thereby asked villagers to propose precisely the interventions the project was equipped to provide: training sessions, technical advice, and templates for community management institutions. Yet what made PAGERNA's narrative locally effective was also that it appealed to class- and gender-based experiences of status loss following the collapse of the peanut economy. The lack of trees reflected women's experiences of the labor burden of finding firewood. Meanwhile, male elders and household heads – who had controlled land during the peanut boom – readily associated the practices to which PAGERNA attributed environmental degradation with a generalized breakdown of patriarchal authority. They saw the young men who cut wood and herded livestock as precisely the unruly agents who were subverting their authority (Galvan 2004; Perry 2009; Gill 2013). In sum, PAGERNA crafted a narrative of environmental and social decline that solicited support from a village patriarchal elite, while proposing a project to re-establish a

harmonious and regulated village community. As will be seen, this alliance was critical to enabling the project to produce a particular territorialization of land and resources.

6. FIXING PROPERTY: THE MAKING OF VILLAGE FORESTS

PAGERNA staff's engagement with residents in pilot villages allowed them to identify the kinds of traditional land management practices they were looking for. These became sources of inspiration for developing the project's approach. One practice in particular became central to the ensuing activities: a new spatial category that staff labelled the "*aire mise en defens*" (protected site). Originally drawing inspiration from particular villages, PAGERNA ultimately replicated the *aires mise en defens* (hereafter AMDs) across the region. This approach was later taken up by subsequent development projects. During our skype interview, Thomas, PAGERNA's technical director, explained how the concept first came about:

When we began working in a village, we provoked questions about degradation. They said: 'You must do reforestation.' When we asked about the experience with reforestation, they said that it hadn't worked well; they had tried a few species like eucalyptus, but that didn't work well. So we researched the alternatives with them. Until someone had the idea to protect sites that were degraded but with a strong regeneration [i.e. tree regrowth]. So we found it was maybe a good idea. We asked the question: 'How do we do it? Because there are livestock, there are people who collect wood, even if it's dead wood.' They [villagers] said, 'We need to do internal regulations [*règlements intérieurs*], to say "here are the rules."' [...] So they found- I mean this came practically from the population. [They] had ideas and we tried to accompany them in their ideas. [...] So it began with a single village that sought to protect the space with a few rules.

Thomas located the origins of the AMD concept in a discussion with the residents of one village, who suggested delineating an area of land for protection and instituting rules to forbid

the harvesting of timber or firewood²⁰. While I could not establish whether this idea was actually formulated in a single village workshop, PAGERNA staff and residents of Niokoar District consistently attributed it to the village of Njekk. In 1994, residents of this village, led by the village chief, declared that they would protect a 5-hectare strip of land near the village. The rules stipulated that, whether living or dead wood, “not even a toothpick” could be taken from the site. PAGERNA staff instructed villagers to appoint a guard who would monitor the site and halt those who broke the rules. They appointed Ousmane, a farmer in his 50s and a cousin of the village chief. Ousmane told me that during the first few years of protection, he visited the AMD site every day. He had frequently caught women from Njekk or neighboring villages, bringing them to the chief to whom they paid a fine of 2,000 fcfa (4 USD). In an event often narrated by villagers, Ousmane once caught one of the chief’s wives, and the chief made a point of publicly paying her fine.

After three years of protection, Njekk’s AMD had become densely covered with the shrubby species *nger* (*Guiera senegalensis*) and *ratt* (*Combretum* sp.). After 5 years, trees had reached several meters high, with species including *surur* (*Vachellia seyal*) and *siddem* (*Zizyphus mauritania*). When villagers approached PAGERNA staff about harvesting some of the now abundant wood in the site – citing the chronic shortage of firewood – PAGERNA proposed a system of rotational harvesting. Villagers were authorized to cut one hectare every year, with the

²⁰ PAGERNA staff said the AMDs were inspired by some villages’ practice of protecting areas known *mbolu yaatu*²⁰. These were small sites near villages where residents were prohibited from cutting branches or collecting wood. Remembered as places where villagers had once hidden from colonial authorities, they had more recently served as sheltered areas where those who lacked a pit latrine could go to relieve themselves. In addition to *mbolu yaatu*, PAGERNA staff also cited customary taboos against cutting in sites associated with animist spirits. While these two types of land may have inspired staff, a third type turned out to be more critical for establishing AMDs: livestock corridors known as *sao*. Unlike *mbolu yaatu* and spirit sites, there were no restrictions on cutting trees in *sao*. Most of the AMDs I visited in Niokoar and Beidougoup were on land were also considered *sao* (**Figure 2**).

stipulation that they harvest only fast-growing *nger* and *ratt*. Those who participated – all of who were women – received half of the amount they cut, and had the option to buy the remainder at a subsidized rate. Since this system started, the Njekk forest committee has organized harvests each year, producing annual revenues between 50,000 and 100,000 fcfa (100 to 200 USD)²¹. Ousmane, as forest guard, received 20 percent of these sales, with the rest deposited in an account in the committee’s name, and later used to refurbish the village mosque and to provide interest-free loans of 30 dollars to villagers facing medical emergencies. In 2006, the committee decided to increase the size of Njekk’s AMD from 5 to 12 hectares.

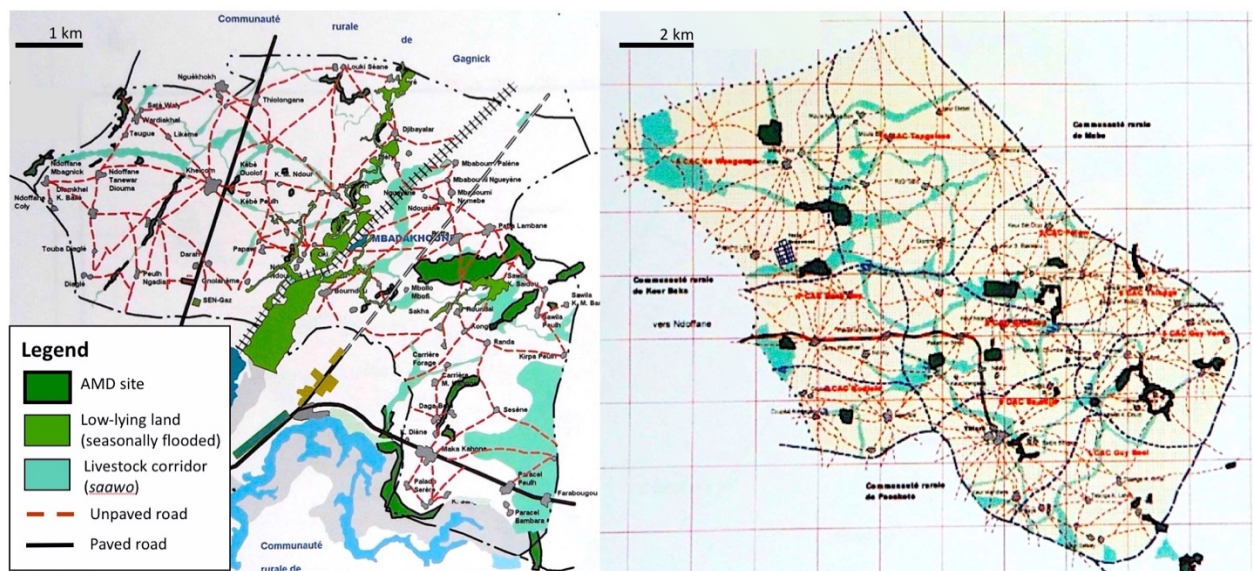


Figure 2 PAGERNA-produced maps of land uses in two districts, highlighting the locations of livestock corridors (*saawo*) and project-established protected sites (*aires mises en defens*). The maps were produced for the project’s 2002 closing report, using data from aerial photos taken by JICA in 1989. Published in PAGERNA 2002; legend added by the author.

²¹ In the villages I visited, reported earnings from AMD harvests varied between 20,000 and 100,000 fcfa (40 and 200 USD). A handful of villages undertook harvests on an annual basis, but others never reached the amount of forest cover required to begin harvesting. Officially, revenues from AMDs were to be apportioned as follows: 25% for the village guards, 10% for the rural council, 5% for inter-village management committees, 40% for a forest management fund, and 10% for village social projects. In practice, it seems money was never given to the inter-village committees.

PAGERNA staff were thrilled by Njekk's experience. When the project began its second phase in 1997, expanding its operations to 17 districts, it asked every participating village to establish an AMD and to appoint a forest management committee. By the time the project closed in 2002, it claimed that 390 AMDs had been established, covering more than 26,000 ha. In Niokoar District alone, 29 villages had established 49 AMDs, covering 873 ha²² (PAGERNA 2003). The project's "Report on Impact Assessment" (PAGERNA 2002) championed the efficiency of AMDs, arguing: "The cost of AMD is not even 1/10 that of replanting [a forest]. It requires only 4-5 sensibilization meetings, a diagnostic for organizational improvement, and some pots of paint or signs to delimit the site. All the rest lies in the 'autodiscipline' of the populations and the willingness of the authorities" (*ibid*, p. 7).

While PAGERNA managers attributed the success of the AMDs to the economic efficiency of forest regeneration and to resident's self-discipline, I argue that what enabled this spatial tool to be deployed in so many villages was the way it entered into ongoing struggles over legitimate forms of property, and over who held authority over land. By converting unowned common-property land into village-controlled forests, the AMDs created alliances among village chiefs, male landholders, livestock keepers, and the rural council – actors who on other land matters tended to be in conflict. It was the support of these actors, and the different normative systems they invoked, that enabled the AMDs to achieve legitimacy as a category of land and set of management practices.

²² Based on my interviews and field visits, the number of areas in which there was an effective restriction of resource uses was likely smaller. Some sites were designated as AMDs, but village authorities never had the ability to exclude people from using them. I also visited several sites designated after the project's close where protection appeared to have been effective.

Regional tenure systems and village-level authorities in Saalum, like in much of West Africa, are founded in social memories of how the area was settled²³. Settlement narratives in Kaolack generally follow a template: they begin with the arrival of a quasi-mythic founding individual, who materially and symbolically converted untamed bushland (*alla*) into a habitable village by burning the forest (Klein 1968). As a result of this founding act, the burner's descendants claim customary ownership over the village territory, represented by a male elder who held the title of "master of fire" (*laman*). Importantly, this lineage group's ownership of the village territory was considered permanent and inalienable. The *laman* granted other families usufruct rights to live and cultivate portions of the village estate in exchange for an annual, ceremonial tribute (Galvan 2004). A family continued to hold usufruct rights so long as descendants continued to live in the village, and they could re-allocate areas to their own kin and allies. Working in the neighboring Serer region of Siin, Dennis Galvan (2004) has extensively documented the evolution of this lamanic land regime over the twentieth century, alongside changing relations between village authorities and the colonial and post-colonial state²⁴. He argues that this system guaranteed families long-term access to land, ensured land was distributed to those who could use it, and maintained soil fertility despite ongoing, intensive cultivation²⁵ (*ibid*, 123-4). While generations of land subdivision diffused the lamans' powers, this tenure system was more or less maintained until Senegal's independence (*ibid*, 170).

²³ The oral histories I collected in Niokoar and Beidougoup dated "original" village settlement to the late-19th century.

²⁴ One of the reasons that *laman* were seen as legitimate, Galvan argues, is that their interests were opposed to those of the *maad* monarchy, which extracted tribute from Serer peasants and who later became administrators and tax collection for the colonial state.

²⁵ Galvan argues that the lamanic tenure system enabled the incorporation of peanuts into the Serer production system. The practice of *tayil* land pawning emerged with the rise of commodity production, allowing households to transfer usufruct rights in exchange for one-time, no-interest cash payments. This

The decisive breakdown of the lamanic tenure system occurred in the late-1960s, when the independent Senegalese state instituted sweeping land reforms (Galvan 2004, 128-30). A pillar of President Léopold Senghor's socialist agenda, the 1964 National Domain Law declared the central state to be the owner of all land, while recognizing the usufruct rights of current users. The law's intention was to allocate land to those who farmed it, overturning the power of customary authorities whom state administrators believed to be predatory and unproductive. The law established a simple criterion for claiming usufruct titles: any man who had farmed a field for two consecutive seasons could request title in his name²⁶. This stripped lamans, village chiefs, and family-heads of their powers to regulate land. It also undermined the principle of land's inalienability which had underpinned practices of land exchange. As a result, farmers became reluctant to lend land to any but the closest of relatives. Those who did often found that, after two years, the borrower registered the land in their own name, an act that Kaolack residents describe with the word "*dominal*". Today, tensions remain high between land claimants who appeal to the National Domain system and those who draw upon the lamanic tenure regime. The National Domain system doubly undermined the system of village land management that had predominated during the mid-20th century: at the village level, it eroded the authority of the lamans and family heads who had ensured a balance of fields and pastures; at the family level, it undermined practices of land lending and fallowing because of the risk of *dominal* claims. These shifts, Galvan argues, led to deforestation and soil depletion in the Peanut Basin (*ibid*, 126-7).

system maintained land's inalienability: the descendants of the original field-owner could reclaim the land by repaying the original money, even as much as two generations later (Galvan 2004).

²⁶ While the National Domain Law envisioned rural councils as the implementers of this policy, the councils were not established and elected until the mid-1970s. In the interim, the Law was implemented by the local representative of the state administration, the *sous-préfet*.

If the National Domain system had the effect of pitting rural councils against village chiefs and family heads, the AMD system introduced by PAGERNA reinforced the powers of both sets of authorities. It did so precisely because it allowed the enclosure of areas over which no one had previously held clear control. In establishing the new protected sites, villages almost invariably chose sites that had not been cultivated in recent memory and which thus could not be claimed through either the National Domain or the lamanic system.²⁷ As a rural councilor in Niokoar explained to me, “no one would consider re-allocating another man’s field as a forest”. Instead, all but one of the AMDs that I identified were sited on pastures or *sao* livestock corridors²⁸. Thus, in contrast to the way the lamanic system had dealt with uncultivated land, the AMD system took for granted that land that was currently or had been previously farmed was fixed as private property. While lamans and household heads had once been able to cycle land between fields, fallows, and pastures, the AMDs contributed to the fixing of land ownership and land-uses: each area was permanently designated either for cultivation or protection. What’s more, AMDs did not merely reinforce the existing regime of private property; they extended it into a new domain through the creation of village-owned forests.

Prior to PAGERNA’s interventions, claims to own land in Kaolack did not entail exclusive rights to the trees and grasses that grew there. In other words, prevailing tenure regimes separated ownership from usufruct rights. For example, a landholding farmer could claim to own trees in his fields. However, he could not easily refuse a neighbor’s request to

²⁷ Blundo (1997) documents a decade-long conflict between two villages in Saalum, precipitated when one village tried to use the National Domain system to claim a strip of uncultivated land that the other village claimed was part of their lamanic territory.

²⁸ In the one case where an AMD was established on agricultural land, the village forest guard explained that the field-holder had been a Guinean who had left the village 20 years previously, and who had no relatives in the area. The rural council had decided that it was very unlikely the field-holder would return and ask to reclaim the area.

harvest leaves or fruits from these trees, unless he himself had immediate plans to use them (*cf* Gill 2013). Meanwhile, forests located in abandoned fields or pastures were seen as open-access: anyone could make use of their timber, fruits, and fodder. Apart from very limited taboos on cutting trees in certain sites associated with animist spirits, there was little precedent for excluding users from collecting forest resources, regardless of their place of residence. Indeed, the National Domain Law actually reinforced forests' status as common-property, since it declared all uncultivated land to be a patrimony of the national citizenry²⁹. The AMDs broke with this precedent: they not only fixed forests in space, but also contracted the scope of citizens who could claim usufruct rights. Except for a handful of very large sites, each AMD was assigned to a single village, and only residents of that village were entitled to the resources that grew there³⁰. The novelty of the exclusions that AMDs proposed were underscored for me when I spoke with, Modou Diouf, a man in his 50s who had worked closely with PAGERNA staff during the early years of the project. Sitting in his scrap metal shop, he explained to me why he felt forests needed to be owned:

The *xur* [unfarmed areas], right now, they're what – they're *commun* [he uses the French word]. Since, like I said, if we say we should leave the *xur*, and the whole village agrees, they'll go to the rural council and they will deliberate the area [i.e. designate it as an AMD], and the whole village will own it. Now no one owns that place anymore, the village population owns it. The way the AMD is today, I don't have the right to go there and cut. Since the village deliberated it. It puts things on the right path! PAGERNA, it put things on the path. Every AMD you see today, the person who does it, is part of the

²⁹ As mentioned above, state classified forests were excluded from the National Domain, and the law excluded public usufruct rights to these resources.

³⁰ The precise terms of access differed across villages and districts. In Niokoar, restrictions focused on timber and firewood, while collection of fruits and leaves was generally permitted. One village in Beidougoup reportedly excluded outsiders from collecting fruits in its AMD. Reports from other areas of Senegal suggest that where fruits attain significant commercial value, villages sometimes use AMD designation to exclude outsiders from collecting them (Papa Faye, personal communication).

team, it's for them. But no *señ-señ* [person from outside the area] can go there and farm it or cut it without people stopping them.

I asked Modou how he could describe outsiders as “stealing” from forests if land was truly “common”. He responded: “You know if they [outside forest-users] plead that there shouldn't be an owner, if you let them cut [trees] and say it's not stealing, then things wouldn't improve (*defar*). Then they wouldn't stop cutting. They would live by cutting.” Modou argued that in order to render a forest valuable (*defar*), it needed to have a village-owner. Those who had previously used the forest would now be considered thieves, and village residents would arrest them if they continued their activities. Later in our conversation, he explained how this affected forest-users' behavior: “Now, if you cut a dead tree, you'll hide if you don't have [authorization] papers. Before you didn't need to hide. In the *xur*, before you didn't need to hide. Now you hide.” By emphasizing that woodcutters hide their activities, Modou underscores that it has become widely known that forests have owners who actively exclude outsiders. This shift from open commons to village-owned forests was an essential part of mobilizing villagers to report rule-breaking and to adhere to forest management plans.

The AMD system thus had the effects of fixing forests in place and constituting them as village property. In so doing, it proposed that villages were bounded spaces with corresponding bounded citizenries. The new relations between villagers and forests in turn helped to forge cooperation between authorities who might otherwise have been opposed: the village authorities who became the legitimate managers of community forests and the rural councils and forestry agents who exercised the state's powers to grant property and enforce laws. As will be seen, enforcing village property claims led to the intertwining of these loci of authority.

7. MAKING AUTHORITY: LINKING COMMUNITY AND STATE REGULATION

While the establishment of AMDs created a form of property oriented around village territories and citizenries, the day-to-day practices of managing forests and enforcing property exceeded the bounds of what PAGERNA had understood as communities. Regulating forests drew together different scales and types of authority. Village chiefs and forest guards called upon rural councilors and forest service agents to bolster their authority to exclude outsiders, while some foresters found closer relationships with villagers helpful for enforcing the law and projecting state administrative power. These relationships of mutual dependence developed despite the initial antimony between advocates of decentralization and Forest Service officials. While these relationships resemble the forms of brokerage on which nearly all ground-level bureaucrats have depended since structural adjustment (Blundo 2001, 2013), they also entail a degree of formalization and routinization that did not previously exist in forest regulation. Whereas previous generations of foresters had defended the Forest Service's jurisdiction over all of Senegal's forests (even though they lacked the capacity to enforce this jurisdiction), in the aftermath of PAGERNA some foresters openly advocated for rural councils and village authorities to take on more responsibility for forests. Rural residents, meanwhile, made new claims upon elected officials and forestry agents, enjoining them to prevent outsiders from "stealing" from village forests and to enforce the law more reliably and transparently. In this sense, informal relationships that had previously been disguised because they disrupted the notion of state power became increasingly central to the practice of projecting this power.

In PAGERNA's initial years of activity, the Forest Service was understandably threatened by its approach to forest management, since it sought to empower villages to set regulations, enforce penalties, and collect revenues across their territories. Forestry officials

believed that local regulations might supersede the forest code and that village committees might bypass Forest Service licensing fees and fines and undermine the agency's prerogatives and funding. Equally important was the precedent that might be set if a development project bypassed the Forest Service and worked directly with villagers: by suggesting that professional foresters were not necessary for development initiatives targeting natural resources, PAGERNA's actions threatened foresters' access to the jobs, equipment, and funding these projects provided (*cf* Blundo 2013, p. 199). Foresters' fears came to a head when PAGERNA refused to pay *per diems* for their participation in meetings and village activities. (Offering civil servants *per diems* had been – and remains – a standard practice for development projects.) In response, numerous foresters refused to attend PAGERNA's meetings and training sessions. Meanwhile, regional and national forestry administrators questioned the legality of the institutions PAGERNA was establishing. They argued that village committees had no legal authority to issue regulations for their territory, and that village guards could not legally make arrests or fine rule-breakers, since these powers were reserved for state agents with policing authority (*agents assermentés*). PAGERNA managers went to great lengths to negotiate with Forest Service administrators and to work around the resistance of lower-level agents. Staff twice renamed the village-level regulation documents that they were publishing, eventually settling on the name “local conventions³¹”.

During PAGERNA's second phase (1997-2002), this approach shifted. Rather than working directly with individual villages, the project decided to support rural councils, which would elaborate management plans at the district level. While AMDs continued to be established

³¹ Previously, the documents had been called “interior regulations” (*règlements intérieurs*), and then “codes of conduct” (*codes de conduite*), before finally being labelled “local conventions” (*conventions locales*).

for particular villages, these were now to be overseen by rural councilors and district-wide forestry committees. The project also sought to formalize its institutional structures. Drawing on the recently-passed decentralization laws, staff asked rural councils in all districts to officially designate the areas that were being used as AMDs, issuing title deeds in the name of the village forest committees. The local conventions that had initially been lists of locally-elaborated rules became legalistic documents that quoted the Forest Code and adhered to the Forest Service's position that forest exploitation required centrally-approved forest management plans. By 2001, these local conventions were being rapidly approved by the rural councils of PAGERNA's 17 intervention districts. These documents avoided the most contentious issues³², including reference to whether village forest committees had powers to make arrests or issue fines. On the basis of these changes in PAGERNA's second phase, one might conclude that Forest Service resistance had successfully checked project managers' ambitions for local governance of natural resources. Yet, despite the project's withdrawal of official support for village authorities, the practices of village guards, rural councilors, and forestry agents were not so easily reigned in.

During my research in 2010, I met with forest guards in 11 villages who claimed they confronted individuals whom they found breaking village forest rules. Several reported having issued at least one local fine in the previous year, in amounts ranging from 2,000 and 5,000 fcfa (4-10 USD). Yet these men did not exercise their powers on their own. Instead, they variously reported to, called upon, and invoked rural councilors and local forestry agents. The case of Niokoar District illustrates how some of these relationships came about. There, Alassane Sarr

³² Rather than a definitive statement about the powers to be exercised by rural councils and village authorities, the later local conventions adopted a conciliatory tone, enjoining forestry agents to support villages seeking to manage forests in their territories, while instructing villagers to obey the prescriptions of the forest code and to follow Forest Service requirements for management plans and harvesting permits.

had served as the head of the rural council's environmental commission since 1997. During this time, he had become the central figure in coordinating the AMD system and had developed relationships with a range of state agents, including the local forestry brigade agent and officials in the regional office, as well as staff in various development projects³³. During the NGO visit through which I first came to Niokoar, Sarr proudly recounted how he had used his connections to overcome political resistance to local management:

The Forest Service thinks that the population is taking over the work of the state. But it's not that. I want them to help out until all of us are forest service agents ourselves. No one can say we [need] a card³⁴ to catch someone. The Forest Service has really helped us in this work. If we need a permit now and they won't give it, it would be difficult. [...] The inspector [the officer at the *département* level] refused to sign the local convention, because he disagreed with local fines. But the 2,000 [fine]³⁵ is to keep among us – that's why we do it. The Forest Service does the real fines. I took the convention to Fatick,³⁶ where the [regional inspector] signed it. The *sous-préfet* signed it. We passed through it. It was painful... But I knew that the local fines were only to create fear inside the community. People who can't afford to pay the 2,000 won't cut. It's not the Forest Service that owns the forest. We own it.

In his narration of how he got his district's local convention approved, Sarr neither contested the forestry inspector's claim that local fines were illegal, nor did he accede to it. Instead, he justified the use of local sanctions as a more effective way to suppress rule-breaking. In subsequent interviews, Sarr expressed frustration about the Forest Service's historic inability to stop charcoal-making in Kaolack Region, noting that certain foresters had taken bribes in

³³ In addition to his roles as councilor, Sarr has acted as a host and fixer for dozens of NGOs, consultants, and researchers who have come to the district in the years since PAGERNA's close. He has also undertaken short-term consultancies with a subsequent GIZ-funded project.

³⁴ The "card" Sarr mentions refers to the identity cards that PAGERNA initially distributed to village guards. This was one of the Forest Service's objections, and PAGERNA ceased distributing ID cards.

³⁵ This 2,000 fcfa (4 U.S. dollar) is a local fine, since the forest code does not include fines this small.

³⁶ At the time the local convention was approved, Niokoar District was allocated to Fatick Region; it has since been re-allocated to Kaolack Region.

exchange for looking the other way when rules were broken. Yet his criticisms did not mean that Sarr eschewed dealing with officials. He needed foresters at different levels of the hierarchy to sign his management plans, issue harvesting and transport permits, and support village guards in prosecuting rule-breakers. Some foresters were more willing than others to cooperate with his requests, Sarr explained. Fortunately, the recent arrival of a new brigade agent had provided an opportunity for him to make an ally.

In early 2009, Sekou Coly arrived in Niokoar to take up his first post as a Forest Service brigade agent. Coly was fresh from graduation at the national forestry school (*Centre National de Formation des Techniciens des Eaux, Forêts, Chasses et des Parcs Nationaux*), having previously done a brief stint with a development project. When we met outside his small, rented room, Coly explained that it was through working with local authorities in Niokoar that he came to understand the importance of Senegal's decentralization reforms: "I found things well organized here. My tasks are reduced, because they know that the forest is theirs and they guard it for themselves. At first there were people [PAGERNA's staff] who helped them by conducting research and by helping them meet their needs³⁷. I read the documents and saw how PAGERNA worked." He explained that he and Councilor Sarr collaborated in their efforts to manage the AMD system: they took turns collecting harvest requests, visiting villages when rule-breakers were caught, and overseeing rotational tree harvests and the collection of funds. For his part, Sarr had convinced the rural council to allocate 5% of the revenues from AMDs towards Coly's motorcycle fuel. As a result of these experiences, Coly was more favorably inclined towards local management than many of his superiors. When I asked what he thought of the practice of

³⁷ During its initial phase, PAGERNA had for several years given peanut seeds to village cooperative so that residents would not take recourse to tree-cutting in order to buy seed. PAGERNA also established a micro-credit scheme serving several villages in Niokoar, which in 2010 continued to provide small loans to those who held savings accounts.

issuing village fines, Coly responded that although this system should be “updated”, it was locally appropriate: “Because here, if you take someone to the law, that person is your enemy. So instead they take you to the village chief. Everyone sits down and they tell you that, next time, they will take you to the Forest Service. I think this system is good.” In fact, he argued, what was needed were more village guards and more oversight by the rural council. He was worried by reports of infractions in a village that had previously been very active in protecting AMDs. He urged the rural council to call meetings to “re-dynamize” the village guards. Without them, Coly explained, he could do little to ensure the protection of the dozens of AMDs in his districts.

For village guards and chiefs, the ability to call upon the Forest Service agent was also important for dealing with potential resistance to their authority. All of the 11 guards I interviewed in Niokoar said that, when they found someone “stealing” from AMDs or lopping branches from a field tree, they would confront him and demand that he come to the village and pay a fine³⁸. When asked whether rule-breakers ever resisted these sanctions, guards responded that if someone refused to cooperate they would call the forestry agent, who could impose a much higher fine or threaten to arrest the rule-breaker. This practice of calling upon the brigade agent appeared to have been common. In interviews, I asked residents if they remembered any instances of rule-breaking in their village, and if so how these incidents had been handled. In 9 of the 20 incidents reported, village authorities had called the brigade agent for assistance³⁹ (**Table**

³⁸ Nearly all of the rule-breakers the guards chose to pursue were men. When they found women harvesting firewood or fruit in an AMD, guards reported letting them go with a warning. The infractions that local authorities considered important enough to prosecute were cutting down any tree besides fast-growing *ngeer* and *ratt*; harvesting *ngeer* and *ratt* for sale (outside of council-regulated AMD harvests); and lopping off tree branches to feed livestock, particularly branches of *kad*, a leguminous tree whose pods are highly valued as animal fodder.

³⁹ It is quite likely that these reported incidents underestimate how often actions were taken to exclude people from village forests; residents might have been less apt to remember infractions that were handled

1). Calling the agent, however, did not necessarily mean abandoning local negotiation and arbitration. Forester Coly reported that, in many cases, he preferred for an infraction to be resolved at the village level. Indeed, the infrequency with which Coly formally reported an infraction via a *procès verbal* document⁴⁰ suggests that he often opted for a local settlement; he issued only 7 of these sanctions in 2009, and 3 in 2010.

Rule-breaker's identity	count	Infraction type	count	What was the outcome?	count
man (same village)	1	collecting firewood	5	pardon rule-breaker	5
man (other village)	12	cutting down tree	5	fine issued	11
woman (same village)	1	lopping branches	6	turned over to police	1
woman (other village)	2	producing charcoal	3	escaped	1
herder	3	unknown	1	unknown	2
unknown	1				

Apprehender's identity	count	Was the forest agent involved?	count
village guard	6	yes	9
village chief or notable	2	no	8
forest service agent	0	NA (escaped)	1
woman	4	unknown	2
other man	5		
unknown	3		

Table 1 Instances of rule-breaking reported during interviews in Niokoar District. These events reportedly occurred between 2006 and 2010. Overall, respondents reported 20 infractions in 11 villages.

The willingness of village authorities in Niokoar district to openly collaborate with the local forester contrasted with the situation in neighboring Beidougoup district, which had received no PAGERNA activities except for support to draft a local convention in 2001.

locally. However, they do suggest that it was not uncommon for village guards to call upon the forest service agent to support their sanctioning.

⁴⁰ A *procès verbal* is the Forest Service document that agents issue to record an official fine or arrest.

Residents of this scantily-targeted district stated that the Forest Service brigade agent rarely came to their villages, and that he prosecuted infractions without informing village chiefs. Several respondents speculated that he preferred to confront rule-breakers in the bush so he could negotiate bribes without there being any witnesses. When I spoke with the brigade agent, Mr. Sène, he argued that although his post had been established only two years previously, his presence had already suppressed charcoal production, a formerly-widespread practice in the area. When I asked if he ever worked with village guards, Sène responded that although several villages had established AMDs, local residents were reluctant to report infractions. While he occasionally received tip-offs about illegal activities, he claimed that villagers preferred for him to prosecute offenders on his own. I later sought to verify this agent's claims when I visited one of the villages that had established an AMD. Interviewing two elderly men who had expressed support for the AMD system, I asked them whether they would be willing to work with forester Sène:

Robinson: Would you report someone to the Forest Service?

Babacar Kémé: If I saw someone cutting a tree like *gwi* [baobab], I would tell him: "What you're doing is bad. Get down!" If he refused, I would call the Forest Service. [pause] But write my name on the paper⁴¹? Never!

Robinson: Why not?

Kémé: What? Never!

Ndiak Youme: To catch someone in your own village is not pretty. You know, the Forest Service agent will go away, but you will be left here.

Kémé: The agent came to my house to pay respects when he first came to this district. But would I indicate? [i.e. report an infraction] No!

⁴¹ Documenting the name of the indicator in the process verbal is the Forest Service's procedure for granting them a portion of any fine that is issued against the offender, as well as a portion of sales of illegal products.

In the account of these two men, open collaboration with the brigade agent would be an act of betrayal that could endanger one's relationships with kin and neighbors. These claims should not lead us to conclude that no rural residents of Beidougoup district cooperate with the Forest Service. The constraints faced by agents like Sène are so severe that he likely does depend on collaborators in order to prosecute infractions. (Sène registered 3 *procès verbal* in 2009, and 5 in 2010.) What Kémé and Youme's expressions of disapproval indicate is the intensity of the moral claims that rule-breakers and their allies could mobilize against someone who reported them to the law⁴². These accounts from Beidougoup make the open cooperation of forest guards and the brigade agent in Niokar District appear all the more anomalous. Understanding these divergent practices, I suggest, requires attending to the dynamics of property and authority.

What factors, then, led to the open collaboration among village authorities, rural councilors, and forestry officials in Niokoar District? My interviews and observations do not allow me to posit the "true intentions" of residents who contributed to monitoring forests and prosecuting rule-breakers. What I can posit are the advantages that might accrue to those who, through involvement in forest management, acquired positions as intermediaries between various loci of political power. At the village level, forest guards received modest material rewards for their work, earning 200 to 3,000 fcfa (0.4-6.0 USD) when a fine were issued, and as much as 20,000 (40 USD) in a year with a successful AMD harvest. Meanwhile, those who interacted with players from outside the district had access to more lucrative opportunities; councilor Sarr, head of the environmental commission in Niokar, was regularly compensated by NGO staff in exchange for acting as a local guide. On one occasion, he had undertaken a well-paying

⁴² Blundo (2008) documents similar proscriptions against reporting infractions to state agents (customs officers), while both Blundo (1997) and Galvan (2004) document the severity of the social sanctions that can follow if a claimant appeals to the state (via rural councils) to settle a dispute over land.

consultancy with a development project. Opportunities in Niokoar nonetheless remained relatively modest in the absence of other development projects. I visited another district where a subsequent development project had supported commercial charcoal production in one of the AMDs established under PAGERNA. There, the head forest guard had earned enough from project compensation and levies on charcoal sales to build a handsome, zinc-roofed house⁴³. Beyond the immediate material benefits of being an intermediary, this position granted men involved in forest regulation a new degree of authority in village affairs (see also Blundo 1995). For the patriarchal chiefs and household heads whose authority had waned after the peanut boom, links to state institutions and development projects provided influence over the distribution of opportunities and resources, which they could use to reassert their status as village authorities⁴⁴.

In sum, community forest regulation in Niokoar contributed to networks of authority that linked state agents, elected officials, and community authorities more closely and openly than before. These actors increasingly found shared interests in achieving stricter and more exclusive regulation of forests. Community forestry had affected a reterritorialization of land, people, and authority. Yet the institutional forms that emerged were not the neatly-nested spatial hierarchies envisioned in legal texts and project designs. Instead, the spatial enclosure of village forests was achieved by mobilizing extra-local networks and quasi-formal practices of cooperation, leading to a multiplication of authorities with a stake in controlling forests. The structure that emerged tended to deviate from official procedures and to deepen state actors' dependence on other actors who were supposedly outside the state. In short, territorial decentralization in Kaolack

⁴³ On the importance of networks of brokers and intermediaries in channeling and appropriating development projects, see Blundo 1995.

⁴⁴ Elsewhere in Kaolack Region, Perry documented how elders mobilized the violence of the police in order to discipline youths who they regarded as “hooligans” (Perry 2009).

contributed not only to new enclosures and exclusions but also to the informalization, privatization, and dispersion of state power.

8. ENCLOSING FORESTS, PRIVATIZING STATE POWER

The spatial and political realignments that accompanied decentralization of forest governance in Kaolack, Senegal highlight the powerful effects that projects of territorialization can have. To produce these effects, the devolution of legal powers from the national Forest Service to elected rural councils converged with a development project's efforts to foster self-regulating communities and a patriarchal elite's attempts to re-establish their authority over land. The conjoining of these processes is what allowed spatial techniques for ordering forests (AMDs) and juridical techniques for distributing legal powers (local conventions) to become effective. Various actors drew upon these legal and spatial technologies in their efforts to construct and legitimize their authority over land, resources, and people. The result was the production of new forms of village property and networks of authority that linked state officials and village elites.

The spatialized order that emerged from this process has proved lasting and mobile, even as it has continued to shift since this research was conducted. In the past ten years, development projects have sponsored the production of hundreds of local conventions for natural resource management in Senegal and neighboring countries, sometimes citing PAGERNA as a source of inspiration (Djiré, Polack, and Cotula 2014; Granier 2010). Meanwhile, ongoing revisions to Senegal's forest code have proposed making local conventions one of the principle mechanisms for decentralizing governance of natural resources (Faye, Haller, and Ribot 2017). More recently, additional trends have emerged: while PAGERNA promoted forests as collective village properties, recent development initiatives have used the same legal techniques to designate

privatized forests under the control of particular individuals or associations (*groupements d'intérêt économique*) (USAID 2011; Faye and Sougou 2014).

While the case of Kaolack shows how state, development, and customary power can come together to enclose resources, it also underscores that, in contexts where state functions have been informalized and privatized (Blundo 2001; Hibou 2004), territorialization takes place not through coherent, technical plans for ordering space, but also through the pragmatic mobilization of political alliances across disparate institutions and scales (Juul 2001). This helps to explain why PAGERNA managers' plans for village self-management were only partially successful, and why spatial ordering techniques had highly uneven effects. While some forests were protected, regenerated, and regulated, other villages never established AMDs or refused to recognize their neighbors' claims to forests.

Understanding the highly uneven effects of projects of territorialization, I argue, requires attending to the complex politics of political allegiance and intermediation that take place under conditions of institutional pluralism and informal privatization (Lund 2006). Research exploring the interaction of territory-making and the politics of authority reveals how particular territorial orderings are constantly produced and transformed through multiple polities' and institutions' struggles for recognition and authority (Byrne, Nightingale, and Korf 2016). Other work shows how "entangled territories" emerge from cooperation and competition among multiple, privatized authorities, creating ordered resource frontiers beyond the reach of state administration (Peluso 2016). In a similar vein, I have argued that forest decentralization in Kaolack entangled authorities that present themselves as distinct: customary village leaders, local elected officials, commercial interests, and the Forest Service. These linkages challenge the construction of boundaries between official law and customary power, and between state

institutions and civil society, boundaries that have been constructed as part of projects of state power beginning with colonial rule (Mitchell 1990; Mbembe 2001). As Byrne et al (2016) argue, "Territory is not something that a state construes, 'governmentalizes' and achieves (or not). It is, we claim, 'made' through an amalgam of territorializing practices that a variety of state and non-state actors devise, but it nevertheless produces a state 'effect'" (1270). In this article, I have suggested that processes of political decentralization, land enclosure, and privatized power act both to create the effect of state territorialization while also subverting the very separations on which the idea of the state is based.

9. REFERENCES

- Agnew, John. 1994. "The Territorial Trap: The Geographical Assumptions of International Relations Theory." *Review of International Political Economy* 1 (1): 53–80.
- Alinon, Koffi, and Antoine Kalinganire. 2008. "Effectiveness of Bylaws in the Management of Natural Resources: The West African Experience." Washington, DC: International Food Policy Research Institute.
- Ba, El Hadji Dialigué. 2006. "Le Quota Est Mort, Vive Le Quota! Ou Les Vicissitudes de La Règlementation de L'exploitation Du Charbon de Bois Au Sénégal." Dakar: CODESRIA.
- Ballvé, Teo. 2012. "Everyday State Formation: Territory, Decentralization, and the Narco Landgrab in Colombia." *Environment and Planning D: Society and Space* 30 (4): 603–22.
- Bandiaky, Solange. 2008. "Gender Inequality in Malidino Biodiversity Community-Based Reserve, Senegal: Political Parties and the 'Village Approach.'" *Conservation and Society* 6 (1): 62–73.
- Bardhan, Pranab, and Isha Ray. 2006. "Methodological Approaches to the Question of the Commons." *Economic Development and Cultural Change* 54 (3): 655–76.
- Bassett, Thomas J, Chantal Blanc-pamard, and Jean Boutrais. 2007. "Constructing Locality: The Terroir Approach in West Africa." *Africa: Journal of the International African Institute* 77 (1): 104–29.
- Berry, Sara. 2009. "Property, Authority and Citizenship: Land Claims, Politics and the Dynamics of Social Division in West Africa" 40: 23–45.
- Blaikie, Piers. 2006. "Is Small Really Beautiful? Community-Based Natural Resource Management in Malawi and Botswana." *World Development* 34 (11): 1942–57.
- Blundo, Giorgio. 1995. "Les Courtiers Du Développement En Milieu Rural Sénégalais." *Cahiers*

- D'études Africaines* 35 (137): 73–99.
- . 1997. “Gérer Les Conflits Fonciers Au Sénégal: Le Rôle de L’administration Locale Dans Le Sud-Est Du Bassin Arachidier.” In *Développement Durable Au Sahel*, 103–22. Paris: KARTHALA.
- . 2001. “Négociier l’État Au Quotidien: Agents D’affaires, Courtiers et Rabatteurs Dans Les Interstices de L’administration Sénégalaise.” *Autrepart* 4 (20): 75–90.
- . 2013. “Les Eaux et Forêts Sénégalais Entre Participation et Militarisation Les Eaux et Forêts Sénégalais Entre Participation et Militarisation Ethnographie D’une Réforme.” *Anthropologie et Développement* 37–39: 185–222.
- . 2014. “Seeing Like a State Agent: The Ethnography of Reform in Senegal’s Forestry Services.” *States at Work: Dynamics of African Bureaucracies*, no. April: 69–89.
- Blundo, Giorgio, and Pierre-Yves Le Meur. 2008. “An Anthropology Of Everyday Governance: Collective Service Delivery And Subject-Making.” In *The Governance of Daily Life in Africa : Ethnographic Explorations of Public and Collective Services*. Boston: BRILL.
- Brosius, J. Peter, Anna Lowenhaupt Tsing, and Charles Zerner. 1998. “Representing Communities: Histories and Politics of Community-Based Natural Resource Management.” *Society and Natural Resources* 11 (2): 157–68.
- Byrne, Sarah, Andrea J. Nightingale, and Benedikt Korf. 2016. “Making Territory: War, Post-War and the Entangled Scales of Contested Forest Governance in Mid-Western Nepal.” *Development and Change* 47 (6): 1269–93.
- Corson, Catherine. 2011. “Territorialization, Enclosure and Neoliberalism: Non-State Influence in Struggles over Madagascar’s Forests.” *Journal of Peasant Studies* 38 (4): 703–26.
- Djiré, Moussa, Emily Polack, and Lorenzo Cotula. 2014. “Sécuriser Les Droits Fonciers En

- Afrique de l'Ouest : Une Approche Ascendante.” *IIED Briefing* April. London: International Institute for Environment and Development.
- Duffy, Rosaleen. 2005. “Global Environmental Governance and the Challenge of Shadow States: The Impact of Illicit Sapphire Mining in Madagascar.” *Development and Change* 36 (5): 825–43.
- Elden, Stuart. 2010. “Land, Terrain, Territory.” *Progress in Human Geography* 34 (6): 799–817.
- Fairhead, James, and Melissa Leach. 1995. “False Forest History, Complicit Social Analysis: Rethinking Some West African Environmental Narratives.” *World Development*.
- Faye, Papa. 2015. “Forest Policy and Economics Choice and Power: Resistance to Technical Domination in Senegal’s.” *Forest Policy and Economics* 60. Elsevier B.V.: 19–26.
- Faye, Papa, Tobias Haller, and Jesse Ribot. 2017. “Shaping Rules and Practice for More Justice. Local Conventions and Local Resistance in Eastern Senegal.” *Human Ecology*. Human Ecology, 1–11.
- Faye, Papa, and Oumou Kaltom Sougou. 2014. “Dionewar (Sénégal): Quand Les Comités Servent À Capturer L'accès Aux Ressources Naturelles, Au Pouvoir Local et Aux Projets.” *Territoires d'Afrique* 5: 1–13.
- Galvan, Dennis C. 2004. *The State Must Be Our Master of Fire: How Peasants Craft Culturally Sustainable Development in Senegal*. Berkeley, CA: University of California Press.
- Gill, Peter. 2013. “Working with Local People to Identify Tree Services, Deforestation Trends, and Strategies to Combat Deforestation: A Case Study from Senegal’s Peanut Basin.” Master’s thesis, University of Washington.
- Granier, Laurent. 2006. “Les Conventions Locales de Gestion des Ressources Naturelles et de L’environnement: Legalité et Coérence en Droit Sénégalais.” *Droit et Politique de*

- l'Environnement* 65. Gland, Switzerland: IUCN.
- . 2010. “Are Local Conventions Effective Tools for the Joint Management of Natural Resources ?” Paris: Land Tenure and Development Technical Committee.
- Gray, Leslie C. 2002. “Environmental Policy, Land Rights, and Conflict: Rethinking Community Natural Resource Management Programs in Burkina Faso.” *Environment and Planning D: Society and Space* 20 (2): 167–82.
- Hibou, Beatrice. 2004. “Introduction: From Privatising the Economy to Privatising The State: An Analysis of the Continual Formation of the State.” In *Privatizing the State*, Beatrice Hibou, Ed, 1–46.
- Jones, Reece. 2012. “Spaces of Refusal: Rethinking Sovereign Power and Resistance at the Border.” *Annals of the Association of American Geographers* 102 (3): 685–99.
- Juul, Kristine. 2001. “Power, Pastures and Politics: Boreholes and Decentralization of Local Resource Management in Northern Senegal.” In *Politics, Property and Production in the West African Sahel: Understanding of Natural Resources Management*. Uppsala, Sweden: Nordiska Afrikainstitutet.
- . 2006. “Decentralization, Local Taxation and Citizenship in Senegal.” *Development and Change* 37 (4): 821–46.
- Kaag, Mayke. 2005. “Fighting over Crumbs? Small Valleys in West Africa as a New Locus of Land Claims.” In *Competing Jurisdictions: Settling Land Claims in Africa*, Sandra Evers, Marja Spierenburg, and Harry Wels, Eds, 333–51. Boston: BRILL.
- Klein, Martin A. 1968. *Islam and Imperialism in Senegal; Sine-Saloum, 1847-1914*. Stanford, CA: Stanford University Press.
- Lavigne Delville, Philippe. 2009. “Des Conventions Locales Pour Gérer Ensemble Les

- Ressources Naturelles ?” *Grain de Sel* 46–47: 9–10.
- Liba’ a, Kossoumna. 2011. “Processus, Acteurs et Performances Dans Les Conventions Locales et La Gestion Des Ressources Naturelles En Zones Soudano-Sahéliennes d’Afrique.” *Revue de l’Université de Moncton* 42 (1–2): 221–41.
- Lund, Christian. 2006. “Twilight Institutions, Public Authority and Political Culture in Local Contexts: An Introduction.” *Development and Change* 37 (4): 1–27.
- . 2008. *Local Politics and the Dynamics of Property in Africa*. Cambridge, UK: Cambridge University Press.
- . 2016. “Rule and Rupture: State Formation through the Production of Property and Citizenship.” In *Rule and Rupture: State Formation through the Production of Property and Citizenship*, Christian Lund and Michael Eilenberg, eds, Chichester, UK: Wiley Blackwell.
- Lund, Christian, and Catherine Boone. 2013. “Introduction: Land Politics in Africa-Constituting Authority over Territory, Property and Persons.” *Africa* 83 (1): 1–13.
- Lund, Jens Friis, Rebecca Leigh Rutt, and Jesse Ribot. 2018. “Trends in Research on Forestry Decentralization Policies.” *Current Opinion in Environmental Sustainability* 32. Elsevier B.V.: 17–22.
- Mathews, Andrew S. 2011. *Instituting Nature: Authority, Expertise, and Power in Mexican Forests*. Cambridge, MA: The MIT Press.
- Mbembe, Achille. 2001. *On the Postcolony*. Berkeley, CA: University of California Press.
- Mbow, Cheikh, Ole Mertz, Awa Diouf, Kjeld Rasmussen, and Anette Reenberg. 2008. “The History of Environmental Change and Adaptation in Eastern Saloum-Senegal-Driving Forces and Perceptions.” *Global and Planetary Change* 64 (3–4). Elsevier B.V.: 210–21.
- Mitchell, Timothy. 1990. “Everyday Metaphors of Power Timothy Mitchell Everyday Metaphors

- of Power.” *Theory and Society* 19 (5): 545–77.
- Mosse, David. 2005. *Cultivating Development: An Ethnography of Aid Policy and Practice*. London: Pluto Press.
- Ostrom, Elinor. 2015. *Governing the Commons: The Evolution of Institutions for Collective Action*. *Governing the Commons: The Evolution of Institutions for Collective Action*.
- Oya, Carlos. 2001. “Large- and Middle-Scale Farmers in the Groundnut Sector in Senegal in the Context of Liberalization and Structural Adjustment.” *Journal of Agrarian Change* 1 (1): 124–63.
- . 2006. “From State Dirigisme to Liberalisation in Senegal: Four Decades of Agricultural Policy Shifts and Continuities.” *European Journal of Development Research* 18 (2): 203–34.
- PAGERNA. 1995. “Bilan Diagnostic Des Ressources Naturelles de La Region du ‘Sine-Saloum.’” Kaolack: Duetsche Gesellschaft fur Technische Zusammenarbeit (GTZ).
- . 2002. “Fiche Bilan d’Impact.” Kaolack: PAGERNA.
- . 2003. “Capitalisation Des Acquis Du PAGERNA Projet Autopromotion et Gestion Des Ressources Naturelles Au Sine Saloum) Dans Le Domaine de La Réhabilitation Du Couvert Végétal et de L’habitat de La Faune Sauvage.” Kaolack, PAGERNA.
- Peluso, Nancy Lee. 2016. “Entangled Territories in Small-Scale Gold Mining Frontiers: Labor Practices, Property, and Secrets in Indonesian Gold Country.” *World Development* 101. Elsevier Ltd: 400–416.
- Peluso, Nancy Lee, and Christian Lund. 2011. “New Frontiers of Land Control: Introduction.” *Journal of Peasant Studies* 38 (4): 667–81.
- Peluso, Nancy Lee, and Peter Vandergeest. 2001. “Genealogies of the Political Forest and

- Customary Rights in Indonesia, Malaysia, and Thailand.” *The Journal of Asian Studies* 60 (3): 761–812.
- Perry, Donna L. 2009. “Fathers, Sons, and the State: Discipline and Punishment in a Wolof Hinterland.” *Cultural Anthropology* 24 (1): 33–67.
- Poteete, Amy R., and Jesse C. Ribot. 2011. “Repertoires of Domination: Decentralization as Process in Botswana and Senegal.” *World Development* 39 (3).
- Reenberg, Anette. 2012. “Insistent Dryland Narratives: Portraits of Knowledge about Human-Environmental Interactions in Sahelian Environment Policy Documents.” *West African Journal of Applied Ecology* 20 (1): 97–111.
- Reno, William. 2000. “Clandestine Economies, Violence and States in Africa.” *Journal of International Affairs* 53 (2): 433–59.
- Ribot, Jesse C. 2009. “Authority over Forests: Empowerment and Subordination in Senegal’s Democratic Decentralization.” *Development and Change* 40 (1): 105–29.
- Ribot, Jesse C., and Nancy Lee Peluso. 2003. “A Theory of Access.” *Rural Sociology* 68 (2): 153–181.
- Ribot, Jesse C., Ashwini Chhatre, and Tomila Lankina. 2012. “Introduction: Institutional Choice and Recognition in the Formation and Consolidation of Local Democracy.” *Conservation and Society* 6 (1): 1–11.
- Sack, R.D. 1986. *Human Territoriality: Its Theory and History*. Cambridge, UK: Cambridge University Press.
- Sardan, Jean-Pierre Olivier De. 2014. “The Delivery of Public or Collective Goods and Services.” In *States at Work: Dynamics of African Bureaucracies*, Thomas Bierschenk and Jean-Pierre Olivier de Sardan, eds. Boston: BRILL.

- Sikor, Thomas, and Christian Lund. 2009. "Access and Property: A Question of Power and Authority." *Development and Change* 40 (1): 1–22.
- St-Amant-Ringuette, Amélie. 2014. "Gestion Participative des Ressources Naturelles: Analyse de Son Efficacité au Burkina Faso." Master's thesis, Université de Sherbrooke.
- Tappan, G., M. Sall, E.C. Wood, and M. Cushing. 2004. "Ecoregions and Land Cover Trends in Senegal." *Journal of Arid Environments* 59: 427–62.
- Thiaw, Sagane, and Jesse C/ Ribot. 2005. "Insiders out: Forest Access through Village Chiefs in Senegal." In *Competing Jurisdictions: Settling Land Claims in Africa*, edited by Sandra Evers, Marja Spierenburg, and Harry Wels. Boston: BRILL.
- Umutoni, Clarisse, Augustine Ayantunde, Matthew Turner, and Germain J. Sawadogo. 2016. "Community Participation in Decentralized Management of Natural Resources in the Southern Region of Mali." *Environment and Natural Resources Research* 6 (2): 1.
- USAID. 2011. "USAID Wula Nafaa Project Quarterly Reoprt: October-December 2010." Dakar: USAID.
- Vandergeest, Peter, and Nancy Lee Peluso. 1995. "Territorialization and State Power in Thailand." *Theory and Society* 24 (3): 385–426.
- Venema, Bernhard. 1978. "The Wolof of Saloum: Social Structure and Rural Development in Senegal." PhD dissertation, Wageningen University.